

**Case 3281*****Nahecaris* Jaekel, 1921 (Malacostraca, Phyllocarida, Archaeostraca): proposed precedence over *Dilophaspis* Traquair in Walther, 1903**

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**Abstract.** The purpose of this application, under Articles 23.9.3 and 81.2.3 of the Code, is to conserve the generic name *Nahecaris* Jaekel, 1921 for a group of Lower Devonian phyllocarid crustaceans (order Archaeostraca) by giving it precedence over the older name *Dilophaspis* Traquair in Walther, 1903 whenever the two names are considered to be synonyms.

**Keywords.** Nomenclature; taxonomy; Phyllocarida; Archaeostraca; *Nahecaris*; *Dilophaspis*; *Nahecaris stuertzi*; *Dilophaspis lata*; Hunsrück Slate; Lower Devonian; Germany.

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1. Traquair in Walther (1903, pp. 30–31) proposed the name *Dilophaspis lata* for a fossil from the Emsian of Rossbach (Hessen, Germany) that he interpreted as the dorsal shield of a cyathaspid (i.e. a heterostracan fish). The type species of *Dilophaspis* Traquair in Walther, 1903 (p. 30) by original designation is the new species *D. lata* Traquair in Walther, 1903. The single specimen reported was not figured. In 1942 Solle (p. 125, footnote) recorded the opinion of W. Gross that *D. lata* was not a fish but a large arthropod.

2. The new generic and specific names of *Nahecaris Stürtzi* (corrected to *N. stuertzi*) were proposed by Jaekel (1921, p. 290) for a fossil phyllocarid crustacean from the Lower Devonian roofing slates of Bundenbach and Gemünden. Due to the exceptional preservation of the limbs and other features in pyrite this taxon has become one of the most widely known fossil phyllocarids (Bartels et al., 1998).

3. In 1990 Hahn revised *Dilophaspis lata* and figured (for the first time) the holotype and only reported specimen. He demonstrated that it is a phyllocarid crustacean with strong similarities to the contemporaneous genus *Nahecaris* and pointed out that the discovery of more material of *D. lata* would probably demonstrate that it and *N. stuertzi* are only distinct at the specific level. Hahn (1990, p. 15) noted that 'in this case, unfortunately, *Dilophaspis* has nomenclatural precedence, and the well known name *Nahecaris* becomes its younger subjective synonym'.

4. Brauckmann et al. (2002, p. 217) described a new species of phyllocarid from the Emsian of the Western Eifel and Luxembourg that they named *Dilophaspis frankei*. This species combines morphological characters of both *Dilophaspis* and *Nahecaris*

leading Brauckmann et al. to identify them as subjective synonyms. In their view 'this means that, unfortunately, *Dilophaspis* has nomenclatural precedence, whereas the well known and better understood name *Nahecaris* as its younger subjective synonym has to be suppressed' (Brauckmann et al., 2002, p. 216).

5. The genus *Nahecaris* from the Hunsrück Slate was redescribed by Bergström et al. (1987; 1989) who assigned specimens to *Nahecaris stuertzi*, *Nahecaris? balsi* Broili, 1930 and *Nahecaris* sp. In 2002 Rode & Liebermann emended the diagnosis of *Nahecaris* to include *Nahecaris bipennis* (Clarke, 1898) from the Middle Devonian of New York State extending its occurrence beyond the Hunsrück Slate.

6. The name *Dilophaspis* Traquair in Walther, 1903 has formal priority over *Nahecaris*. However, the taxon has been called *Nahecaris* since Jaekel described *N. stuertzi* in 1921. The identity of *Dilophaspis* as a crustacean, as opposed to a fish, was only confirmed in 1990 and it was not formally synonymized with *Nahecaris* until 2002. The reconstruction of *D. frankei* by Brauckmann et al. (2002, fig. 6), apart from the carapace, is based entirely on *N. stuertzi* from the Hunsrück Slate; only the carapace of *D. frankei* is known. The assertion by Brauckmann et al. (2002, p. 220) that *Nahecaris* does not meet the condition of Article 23.9.1.2 is incorrect. We have consulted over 40 works that mention *Nahecaris* (over half of them including reconstructions of the animal or illustrations of specimens) by over 40 different authors (many joint) published in the last 50 years (a list is held by the Commission Secretariat). Ironically, both Hahn (1990) and Brauckmann et al. (2002) stated that the name *Nahecaris* is 'well known' and expressed regret that *Dilophaspis* has precedence, yet neither approached the Commission with a proposal to give *Nahecaris* precedence. The use of *Dilophaspis* over *Nahecaris* would cause considerable confusion given the status of *Nahecaris* as one of the best and most completely known examples of a fossil phyllocarid. We therefore propose that *Nahecaris* be given precedence over *Dilophaspis* whenever these names are considered to be synonyms. However, in the unlikely event that future discoveries show that *Nahecaris* is not congeneric with *Dilophaspis*, both names would still be available to denote the two taxa.

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to give the name *Nahecaris* Jaekel, 1921 precedence over the name *Dilophaspis* Traquair in Walther, 1903 whenever the two are considered to be synonyms;
- (2) to place on the Official List of Generic Names in Zoology the following names:
  - (a) *Nahecaris* Jaekel, 1921 (gender: feminine), type species by original designation *N. stuertzi* Jaekel, 1921, with the endorsement that it is to be given precedence over the name *Dilophaspis* Traquair in Walther, 1903 whenever the two names are considered to be synonyms;
  - (b) *Dilophaspis* Traquair in Walther, 1903 (gender: feminine), type species by original designation *D. lata* Traquair in Walther, 1903, with the endorsement that it is not to be given priority over the name *Nahecaris* Jaekel, 1921 whenever the two names are considered to be synonyms;
- (3) to place on the Official List of Specific Names in Zoology the following names:
  - (a) *stuertzi* Jaekel, 1921, as published in the binomen *Nahecaris stuertzi* (specific name of the type species of *Nahecaris* Jaekel, 1921);
  - (b) *lata* Traquair in Walther, 1903, as published in the binomen *Dilophaspis lata* (specific name of the type species of *Dilophaspis* Traquair in Walther, 1903).

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).



*Nahecaris stuertzi* Jaekel, 1921. HS 322 Deutsches Bergbau-Museum Bochum (original of Bergström et al., 1987, fig. 2a and Bartels et al., 1998, fig. 102).